



DEPARTMENT ON DISABILITY SERVICES
DEVELOPMENTAL DISABILITIES ADMINISTRATION
HEALTH CARE BULLETIN
Issued: 1/14/09

Winter Weather

Audience: All

What is hypothermia?

When exposed to cold temperatures, your body begins to lose heat faster than it can be produced. The result is hypothermia, or abnormally low body temperature. Body temperature that is too low affects the brain, making the victim unable to think clearly or move well. This makes hypothermia particularly dangerous because a person may not know it is happening and won't be able to do anything about it.

Hypothermia occurs most commonly at very cold environmental temperatures, but can occur even at cool temperatures (above 40°F) if a person becomes chilled from rain, sweat, or submersion in cold water.

What are the warning signs for hypothermia?

Adults:

- shivering/exhaustion
- confusion/fumbling hands
- memory loss/slurred speech
- drowsiness

What should I do if I see someone with warning signs of hypothermia?

If you notice signs of hypothermia, take the person's temperature. If it is below 95°, the situation is an emergency—get medical attention immediately.

If medical care is not available, begin warming the person, as follows:

- Get the victim into a warm room or shelter.
- If the victim has on any wet clothing, remove it.
- Warm the center of the body first—chest, neck, head, and groin—using an electric blanket, if available. Or use skin-to-skin contact under loose, dry layers of blankets, clothing, towels, or sheets.



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- Warm beverages can help increase the body temperature, but do NOT give alcoholic beverages. Do not try to give beverages to an unconscious person.
- After body temperature has increased, keep the person dry and wrapped in a warm blanket, including the head and neck.
- Get medical attention as soon as possible.

A person with severe hypothermia may be unconscious and may not seem to have a pulse or to be breathing. In this case, handle the victim gently, and get emergency assistance immediately. Even if the victim appears dead, CPR should be provided. CPR should continue while the victim is being warmed, until the victim responds or medical aid becomes available. In some cases, hypothermia victims who appear to be dead can be successfully resuscitated.

What is frostbite?

Frostbite is an injury to the body that is caused by freezing. Frostbite causes a loss of feeling and color in affected areas. It most often affects the nose, ears, cheeks, chin, fingers, or toes. Frostbite can permanently damage the body, and severe cases can lead to amputation.

What are the warning signs of frostbite?

At the first signs of redness or pain in any skin area, get out of the cold or protect any exposed skin—frostbite may be beginning. Any of the following signs may indicate frostbite:

- a white or grayish-yellow skin area
- skin that feels unusually firm or waxy
- numbness

Note: A victim is often unaware of frostbite until someone else points it out because the frozen tissues are numb.

What should I do if I see someone with warning signs of frostbite?

If you detect symptoms of frostbite, seek medical care. Because frostbite and hypothermia both result from exposure, first determine whether the victim also shows signs of hypothermia, as described previously. Hypothermia is a more serious medical condition and requires emergency medical assistance.

If (1) there is frostbite but no sign of hypothermia and (2) immediate medical care is not available, proceed as follows:

- Get into a warm room as soon as possible.
- Unless absolutely necessary, do not walk on frostbitten feet or toes—this increases the damage.

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- Immerse the affected area in warm—not hot—water (the temperature should be comfortable to the touch for unaffected parts of the body).
- Or, warm the affected area using body heat. For example, the heat of an armpit can be used to warm frostbitten fingers.
- Do not rub the frostbitten area with snow or massage it at all. This can cause more damage.
- Don't use a heating pad, heat lamp, or the heat of a stove, fireplace, or radiator for warming. Affected areas are numb and can be easily burned.

Note: These procedures are not substitutes for proper medical care. Hypothermia is a medical emergency and frostbite should be evaluated by a health care provider. It is a good idea to take a first aid and emergency resuscitation (CPR) course to prepare for cold-weather health problems. Knowing what to do is an important part of protecting your health and the health of others.

What is the wind chill effect?

As the speed of the wind increases, it can carry heat away from your body much more quickly. When there are high winds, serious weather-related health problems are more likely, even when temperatures are only cool.

For a Wind Chill Chart (shows the difference between air temperature and perceived temperature and amount of time until frostbite occurs), Wind Chill Calculator, and information on the updated Wind Chill Temperature Index, see www.nws.noaa.gov/om/windchill.

What is the best clothing for cold weather?

Adults and children should wear:

- a hat
- a scarf or knit mask to cover face and mouth
- sleeves that are snug at the wrist
- mittens (they are warmer than gloves)
- water-resistant coat and shoes
- several layers of loose-fitting clothing

Be sure the outer layer of your clothing is tightly woven, preferably wind resistant, to reduce body-heat loss caused by wind. Wool, silk, or polypropylene inner layers of clothing will hold more body heat than cotton. Stay dry—wet clothing chills the body rapidly. Excess perspiration will increase heat loss, so remove extra layers of clothing whenever you feel too warm. Also, avoid getting gasoline or alcohol on your skin while de-icing and fueling your car or using a snow blower. These materials in contact with the skin greatly increase heat loss from the body.

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Do not ignore shivering. It's an important first sign that the body is losing heat. Persistent shivering is a signal to return indoors.

What should I eat and drink during periods of extreme cold?

Eating well-balanced meals will help you stay warmer. Do not drink alcoholic beverages—they cause your body to lose heat more rapidly. Instead, drink warm, sweet beverages such as hot chocolate to help maintain your body temperature. If you have any dietary restrictions, ask your doctor.

How can I heat my home safely?

If you plan to use a wood stove, fireplace, or space heater, be extremely careful. Follow the manufacturer's instructions as well as the advance home safety measures on page 4 and remember these safety tips:

- Store a multipurpose, dry chemical fire extinguisher near the area to be heated.
- Do not burn paper in a fireplace.
- Ensure adequate ventilation by opening an interior door or slightly opening a window if you must use a kerosene heater.
- Use only the type of fuel your heater is designed to use—don't substitute.
- If your heater has a damaged electrical cord or produces sparks, don't use it.
- Use fireplaces, wood stoves, and other combustion heaters only if they are properly vented to the outside and do not leak flue gas into the indoor air space. Make sure chimneys and flues are cleaned periodically.
- Do not place a space heater near things that may catch on fire, such as drapes, furniture, or bedding.

Additional information and resources:

Centers for Disease and Control and Prevention (CDC)
<http://cdc.gov>

Medline Plus
<http://www.nlm.nih.gov/medlineplus>

NOAA, National Weather Service
<http://www.nws.noaa.gov/om/windchill/>

Occupational Safety and Health Administration (OSHA)
http://www.osha.gov/as/opa/cold_weather_prep.html

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